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This paper summarizes the experiences of an instructor and teaching assistant who introduced online communication strategies in a graduate seminar. This paper drew on the findings of a previous paper (Schwier & Balbar, 2002), and examined how to construct structured discussions of content using synchronous and asynchronous communication in graduate learning environments. Several observations and principles are offered, and they are organized into categories that emphasize the source, message,channel and receiver in the communication system. (Contains 4 references.) (Author)

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Interplay of Content and Community Redux: Online Communication in a Graduate Seminar on Theory in Educational Technology

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Paper presented at the Annual Conference of the Association for Media and Technology in Education in Canada, Regina, SK, May 30, 2002

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Interplay of Content and Community Redux: Online Communication in a Graduate Seminar on Theory in Educational Technology

Abstract

This paper summarizes the experiences of an instructor and teaching assistant who introduced online communication strategies in a graduate seminar. This paper drew on the findings of a previous paper (Schwier & Balbar, 2002), and examined how to construct structured discussions of content using synchronous and asynchronous communication in graduate learning environments. Several observations and principles are offered, and they are organized into categories that emphasize the source, message, channel and receiver in the communication system.

Introduction

This study followed the online communication experiences of a group of students in Educational Communications and Technology as they participated in a seminar on the foundations of educational technology. Specifically, we wanted to catalog our experiences and reflect on several lessons we learned about how online communication strategies could be used to enhance the learning environment. In addition, we wanted to consider whether a balance between content and community could be achieved.

Informal observations were drawn from the reflections of the instructor and the teaching assistant in the seminar, and from a review of logs for all of the asynchronous and synchronous activities. The logs effectively covered the entire year; our memories are probably more selective and less reliable. We did keep journals of our observations during the year, but neither of us was systematic in our approach to the task.

Background

This was the second year in which we experimented with online communication activities to substitute for significant portions of the course. During the 2000-2001 academic year, a group of seven graduate students, a teaching assistant and an instructor at the University of Saskatchewan experimented with the use of synchronous communication (chat) and asynchronous communication (bulletin board) in a theory course in Educational Communications and Technology for an eight-month period. The results of that experience were reported by Schwier and Balbar (2002). In summary, despite severe cautions in distance education literature about using synchronous online communication in instruction (Freitas, Myers, & Avtgis, 1998; Haefner, 2000; Murphy & Collins, 1997), synchronous online communication was found to have significant pedagogical benefits. Synchronous online communication contributed dramatically to the continuity and convenience of the class, and promoted a strong sense of community. At the same time, it was viewed as less effective than asynchronous communication for dealing with content and issues deeply, and it introduced a number of pedagogical and intellectual limitations. Asynchronous activities, on the other hand, seemed to allow for more depth and

reflection about issues, but lacked some of the community-nurturing benefits of the chat sessions.

We concluded that synchronous and asynchronous strategies were suitable for different types of learning, and what we experienced was a balancing act between content and community in our group. A combination of synchronous and asynchronous experiences seems to be necessary to promote the kind of engagement and depth required in a graduate seminar. But from this single experience, we weren't able to draw any conclusions about where the fulcrum should be positioned in order to promote the balance we sought.

Context

Four factors dramatically changed the learning environment from that experienced in the 2000/01 delivery of this course:

- Enrollment increased significantly (from seven to thirteen).
- The classroom setting no longer included the entire student group in every session. Two-way videoconferencing was used for several sessions with approximately half of the students.
- Online discussions shifted from mainly synchronous to a balance of asynchronous and synchronous events.
- Two chat sessions were offered for each synchronous event.

Participants

The **classroom** participants included twelve graduate students, one person auditing the course, and the instructor (n = 14). The regular **online** discussion participants included these people plus the teaching assistant moderator, and the teaching assistant from the previous year (n = 16).

Classroom Setting

The course schedule included seven classes where students and the instructor met for a full day, for approximately seven hours of instruction and discussion. The entire class met three times at the University of Saskatchewan; four sessions were delivered via videoconference from the University of Saskatchewan to the University of Regina with the group divided between the two locations. An eighth session including videotaped lectures and accompanying resource material delivered by the instructor.

Online Discussion Setting

The online discussions included both synchronous and asynchronous formats. The normal pattern for online discussion of each topic was to post to bulletin (asynchronous) in the first week then meet in a chat room (synchronous) the second week to discuss themes that emerged from the bulletin. We found after the first session that the entire group was too large to conduct an effective discussion in synchronous format, so two sessions were scheduled for the remaining chat sessions, and students were permitted to select the session that fit their schedules.

Observations Drawn from the Experience

The elements of online communication in this course for 2001/02 are tweezed out of the fabric of content and community and threaded into the framework of classic elements of communication: source, message, channel, receiver. By using this lens for our analysis, we see interesting shifts of perception in the roles of source/instructor, receiver/student.

This approach is used for convenience, and we do not mean to suggest that it is easy or advisable to categorize ideas. Certainly, all of the elements interact to influence any particular event, and it would be folly to suggest that we can decontextualize any of the elements in what was a dynamic communication system.

Source

By source, we refer to the instructor and teaching assistant in the course, who met weekly to generate ideas, shape on-ramp messages, and discuss the progress of the course. For most online events, the teaching assistant prepared or edited initial messages on a topic, and also acted as a touchstone for members of the class as they prepared for their own session moderating a discussion.

The points listed below describe our areas of responsibility or authority as well as our initial approach. We will revisit some of these points later when we analyse the experience from 2001/02.

Observations by the instructor and teaching assistant

The instructor must **balance authority and encouragement**. The instructor needs to be aware that in order for dialogue to flow freely and for a community to develop, there is a need to temper the natural compulsion to control the class -- to hold too firm a grip on the direction of the course. We decided to use the instructor's voice to encourage dialogue without appearing prescriptive or directive, particularly in the topics early in the course. With this in mind, the teaching assistant performed a role that would have been difficult for the instructor to fulfill without compromising his goals for the classroom learning environment. In modern business language we talk about changing hats; this metaphor captures the different responsibilities and experience of the instructor and the teaching assistant as instruction and discussion shifted between classroom setting and online environment. **The online environment is intended as a place where students interact with students**. Even with the instructor lurking, there is a natural tendency to solicit his opinions. As leader of discussion, or coordinator of student moderators, the assistant is like a **gatekeeper** between instructor and student.

For instructors, timing is everything. Related to the previous point, we wanted to make sure that the **strength of the instructor's voice** didn't drown out other voices or dominate discussions. We were aware that students might look to the instructor as the voice of authority, and we wanted to persuade participants to engage each other in conversation. As a result, the instructor remained relatively quiet in early chats, and primarily asked or redirected questions, and the teaching assistant took primary responsibility for moderating online chats. After a few sessions, the instructor was able to increase his involvement in the discussions, and by the mid-point of the class, could participate fully

in discussions without disrupting the flow of conversation. We don't have evidence that this was the direct result of our decision for the instructor to enter discussions gradually, but it was

The **instructor must validate the content/topic**. In classes that are student-centred, there is a danger that the instructor will abdicate responsibility for the content of the course. The instructor, when not controlling the content, still needs to ensure that the subjects dealt with in the course are appropriate. One dilemma of a social constructivist approach to teaching, is how to negotiate the content and treatment of material with students. Some content is outside the experience of students, and it isn't a good idea to have a discussion based on shared ignorance.

The instructor should **pick the discussion venue**. Some issues lend themselves more to online communication than others, and the instructor needs to be a savvy leader who can tell the difference. We will discuss the nature of messages in another section, but the point here is that the instructor must know what will work well as an online topic, and this is really no different than knowing what will work well in a classroom.

The instructor needs to have a high level of **commitment to and energy for teaching**. Online learning environments are time consuming to create and nurture. They are more taxing than traditional learning environments because they require instructors to attend to students in new ways, and to be more accessible to students.

The online instructor must **manage more time, and manage it more effectively** than a traditional instructor. Online instructors can be reached easily at any time. If a student sends an email or an instant message, they expect a reply, and many expect the reply in short order. It is important for an instructor to set expectations for communication with students. If emails will be answered within 24 hours, say so. If you want to reserve Wednesdays for research and reading, let your students know that they should only contact you with urgent messages. It is also useful, given the glut of email, to ask students to use the subject lines of their messages skillfully. We typically ask students to identify the course number in the subject line, and this allows us to identify important messages more quickly.

The instructor must **monitor professional etiquette** in the group. Students are often participating in an online learning community for the first time, and the instructor needs set standards of behaviour and model them for the students. For example, students who are very familiar with using email or chat for social interaction, may bring its casual style of conversation into online learning discussions. While this may contribute to the sense of community, the discourse may not be appropriate for an academic discussion. For example, in the relative isolation and privacy of an online environment, students may choose to ridicule authors whose ideas are challenging or unconventional. The instructor may need to remind students to attack ideas vigorously, but to avoid making personal attacks. We did, however, learn that this type of intervention can be interpreted as heavy-handed. If students consider comments of the instructor as criticism rather than as advice, this type of intrusion may serve to confine expression on other topics later in the course.

Message

Message describes the content of online discussion in synchronous and asynchronous formats.

At the beginning of the year, the instructor and teaching assistant selected topics and the TA moderated the discussion. Each session lasted two weeks with the introduction to the topic followed by asynchronous discussion occurring the first week and synchronous discussion, the second week. Early in the term the students in the course selected a two-week period for sessions they would introduce and moderate as a course assignment.

We mentioned in the description of the context for the class in 2001/02 that there was higher enrollment than the previous year and the entire group could not discuss effectively in synchronous format. We also had two moderators during each two-week period. Moderators were given the option to cooperate and present the same topic, however, this occurred only twice. All of the other two-week periods had two discussion topics. The student participants selected one of the two topics to post comments in the bulletin, but they were free to join either chat session. This degree of flexibility suited the students' schedules and workloads, but it caused a lack of content coherence.

The content for our online discussions is described below. The sequencing of this list follows roughly the schedule for the discussion of each topic during the term.

Selection of topic

Each discussion was based on a course reading or other resource approved by the instructor.

Week 1. Introduction: The topic, i.e. reading, was introduced to the group by the moderator along with a series of questions. The introduction was sent by email and also posted as the first message in the bulletin category with the topic name. Here's an example from the WebCT site for the course – Example of introduction
Responses to introductory questions – Postings in Asynchronous Discussion: suggested word limit; flexibility in choosing question to address from introduction
Responding to postings: Many student moderators responded to all bulletin postings on their topic. Some comments were in the form of questions about experience; some comments were 'thanks' for contributing new ideas and sharing 'best practices'

Week 2. Discussion in synchronous format: Students were expected to review the bulletin posting for the chat session they planned to attend. Early in the year, the moderator extracted themes from the responses to the introduction and posted an introduction containing additional questions for chat. This added extra work for the class and was dropped mid way through the term (without any discussion, I might add). During synchronous discussion it often felt like the moderator was not the leader of discussion but the chairperson at a meeting. All of the participants posed questions of

each other along the themes of requesting elaboration for a comment, or posing an alternate viewpoint and requesting a reaction of one person or the whole group.

Other types of message content

Summary of discussion of topic. Both the teaching assistant and the instructor gave each student moderator individual feedback on the discussion of their topic. This information was not shared with the group. It was not a regular practice for either the teaching assistant or the instructor, or the student moderator to prepare a summary of discussion, although we feel that this might have been a useful addition.

Respect and address cultural diversity: In 2001/02 there were three international students enrolled in the course. We had a unique opportunity of hear first hand about cultural differences in the teaching/learning environment in other countries. Many of the topics reflected a western attitude to culture and teaching; students were invited to respond to any question on their own experience and to relate questions to their own culture.

Analysing the online experience: It is important early in the course for all participants in online discussion to identify positive experiences and suggest ways to build on them. Each individual must find his or her own comfort level with disclosing information about experiences, and the group must find its own comfort level with the asynchronous and synchronous formats.

Channel

By channel, we refer to the influence of the medium on communication among participants. The channel, in this case, included both synchronous communication (chat) and asynchronous communication (bulletin board) within a WebCT template. McLuhan was right; **the medium really is the "massage."** There is a pressing need to be aware of the abrupt, raw nature of communication via this medium. Online communication has few filters, and most users are not highly skilled writers. In addition, the medium does not allow for non-verbal cues that we use to modify meaning in interpersonal communication. Jokes, sarcasm and skepticism can be misinterpreted and can cause problems in the group. The use of stage directions, such as <devilish grin> may help compensate for missing non-verbal cues. If an instructor feels that a particular topic or issue is volatile, or that the group is particularly high-spirited, it may be advisable to agree on a protocol, or identify a trigger word to indicate that something was unintentionally offensive.

We experienced relatively **few and only minimal problems with the technology**. We used a wide variety of connections from diverse locations, ranging from high speed cable connections in the same building as the Web server, to 28.8 MHz dialup modems in Florida and The Hague, Netherlands. Several participants and the instructor connected from cyber cafes, and in all cases, the system seemed to be robust. There is little doubt that frustrations with technology would have been very disruptive to the experience, but this group was fortunate that few problems were encountered. At the same time, it

should be noted that because this was a graduate seminar in educational technology, we were working with a group that was relatively sophisticated and experienced with technology. They not only knew how to fix minor problems, they were also very tolerant of failures in the technology.

Synchronous discussion

Online communication, particularly synchronous communication, **provides a very compressed experience** for participants. After the first chat session, one of our students likened the experience to walking into a crowded wine and cheese reception, where everyone was shouting to talk to people on the other side of the room. The chat sessions are by their nature non-sequential. Two people may be carrying on a conversation, while two others carry on a different conversation, and all of the "speech" appears in the fields of vision of all of the participants. Just as we learn to filter out ambient sound when we have a verbal conversation with someone else in a crowded room, so did our students need to learn how to filter out the ambient textual conversations that constantly interrupted their own. To help the process, we broke the group of fifteen participants into two sessions lasting half an hour each. But we did allow people to attend the sessions they preferred, so we avoided assigning them to groups. The result was a fluctuating population in each "chat" room, but for the most part, a more pacific and reflective learning environment.

Online learning environments, and particularly synchronous communication events, **favour students with excellent typing skills**. Synchronous communication requires students to "speak" through a keyboard, and obviously, those who have difficulty with typing have a serious communication liability. We noticed in both years of this seminar that there were some students who were reluctant typists in chat sessions, and there is little doubt that it inhibited their participation. This is another good reason to balance synchronous and asynchronous communication events. Asynchronous assignments allow students time to carefully reflect on their contributions, but it also allows them time to struggle with the keyboard, if necessary.

Asynchronous discussion

Selecting environments for discussion: Face-to-face environments may be better for some topics. We sensed that the online environment may be inadequate for some topics with a certain group of students. Critical evaluation or deconstruction may be better suited to face-to-face discussions than to online discussions.

Asynchronous communication did allow for depth, but it didn't invite a high degree of interaction among participants. We found that participants posted thoughtful and intelligent commentaries to the bulletin boards on topics. But seldom did excellent postings result in a stream of responses and a genuine discussion. This is partly because of the effort required to respond to something in writing, we think. But it is also possible that the lack of responses was due to the reluctance of participants to "argue" in public, and put arguments in writing. There is the possibility that such discussions would seem rude or threatening – a disruption to the community that was developing. Of course, one typical method of stimulating this type of dialogue is to require students to respond to

each other's postings, but we didn't want to impose that type of requirement on the group—preferring instead to allow conversation to wax or wane naturally.

Synchronous communication is somewhat chaotic, and we found the conversations to be more superficial than either in-class or asynchronous communication. If interactive discussion, not simply responding to questions about a reading, is expected in asynchronous discussion, then it is important to set some rules (e.g. no. of responses per topic) and agree on guidelines for the tone of discussion. Online debate, through the availability of logs, has more permanence than oral debate.

The selection of the venue for discussion can be a dynamic process. We found in the past year that some topics initially selected for online discussion needed to be covered in the classroom environment. During synchronous discussion if a tangent was deemed to be an important, but tangential, topic, we suggested it be moved into bulletin during the chat session. These experiences underline the need for the instructor to be a "savvy leader," as we stated earlier, during the content development stage. The instructor must also be alert during online discussion to detect content that should be addressed more fully in another venue.

Receiver

Of course, the receiver refers to the students, the most important cog in the machine. We introduced online communication elements in order to provide some experience for our students with these types of learning environments. We also wanted to provide additional flexibility and continuity in the course, which previously only met once monthly for marathon weekend sessions. Our worry was that a virtual community might not emerge – that students would be isolated by the experience as much as enlivened by it. We were also concerned that the quality of learning might diminish. Our fears were unfounded, and we suspect that the characteristics of the learners transcended the limitations of the medium. The course was populated by highly motivated, intelligent and experienced scholars. There is little doubt that the characteristics of the learners contributed most dramatically to the successful outcome of the online learning experiences.

A casual observation was that, in general, **overall student performance exceeded the expectations** of the instructors, especially in the asynchronous postings. We typically asked students to post brief, focused observations about readings. They, in response, posted thoughtful, lengthy mini-essays on topics. We found that we had to impose word limits on postings to confine the responses, not because we wanted to inhibit the discussion that was happening, but because students were expected to read and think about all of the postings. Twelve essays were too much for students to manage every other week for 8 months.

We noticed a natural inclination for students to **hover around topics that are comfortable or familiar** (e.g., constructivism in the classroom) **or to return to important principles** such as goals of education. While this is not a surprise (we notice the same tendency in the classroom), it is more difficult for moderators to shift discussion

in new directions. Asynchronous communication is serial, not parallel, (please explain??) and it doesn't invite the shifts and flow that are necessary to exchange ideas dynamically and deeply.

Because we met with the group in face-to-face sessions, we could see that **personalities shone through the medium**. Exuberant students were as effusive in virtual environments as they were in class; shy students often lurked or offered tentative comments. We can't speculate about whether this would have been the same case in a totally virtual context, but it poses an interesting question for research.

There were **some difficulties with language** experienced by our students from other countries, but it was more pronounced in synchronous settings than in asynchronous postings. Asynchronous postings allowed international students to ponder and craft their responses in English, and the comparatively formal style of writing resembled writing a term paper more than having a conversation—a style of expression in English with which they were more comfortable. Chat sessions, on the other hand, required much more fluency and dexterity with the language, given its conversational style and the casual, colloquial nature of language used. The instructors did not ask the group to alter its style or shape messages for those who might have difficulty. We suspected it would mitigate the natural-ness of the environment. But we did, on occasion, mediate a conversation by sending a private message to international students to explain something, and of course, the members of the group often made an explicit effort to include the other students. Our students were also willing to ask for clarification, especially as their comfort with the group and the medium increased during the year. The availability of chat logs also allowed international students to review at leisure chat discussion that went by too swiftly in real time.

Cultural differences may be embedded in some online methods. Our approach to online learning was built on a model of collaboration and social constructivism, and this type of learning emphasizes participation by all members of the group. By its nature, constructivist methods of learning were challenging for students from China and Korea, and they indicated that this approach was very different from the prescriptive teaching methods used in other countries.

Conclusions

Replacing portions of a course with online communication strategies **adds flexibility and also increases the work load and accessibility** of the instructor. The flexibility it afforded was appreciated by the students and the instructors alike. But there is little question that the workload for instructors increased dramatically. It takes a great deal of time to prepare discussion materials or negotiate topics with students. It also takes a great deal of time to review postings and prepare for online chats. Because of this continual preparation/review/chat cycle, it seemed to the instructors that there was never a break from the class. While this is a benefit in terms of maintaining contact, it is a very different cadence from the normal operation of a graduate seminar. The metronome of a face to face seminar typically ticks though a preparation—class meeting—break from the

class—preparation—class meeting—break from the class cycle; whereas the metronome of a mixed mode class swings through preparation for class—class meeting—preparation for online postings—postings—review of postings—preparation for chat—conduct the chat.

The instructor has also developed the opinion that **teaching assistance is not a luxury**. A teaching assistant not only looks after aspects of the course, thus making the additional workload possible, she can also provides a second perspective on the conduct of the course. Everything from deciding topics for online discussions to anticipating problems some students may be having are improved by having a second set of eyes in the course.

Building online communities can result in moments of great **exhilaration and moments of high anxiety**. It seemed as though the level of comfort one achieves in a classroom setting was never achieved in the online events. The fear that the technology might fail, or that students wouldn't carry the discussion, was always lurking. But there were equal moments of exhilaration, as when the group engaged each other in a vibrant discussion or when bulletin board postings explored an idea with academic rigor. We continue to seek a balance between the energy, creativity, and dynamic interaction we observed in chat sessions with the reflections and opportunity to describe at length one's praxis in bulletin. We think it is important to prepare students to **expect the inevitable gaffes and failures** associated with using technology, and to understand that the group will need to transcend some of the inherent limitations of the medium. Because instructors are in a weaker position to salvage a class session if something goes wrong, the group needs to know that they are expected to tolerate—or even repair—the problem. For example, if the WebCT server is off-line on the evening of a scheduled chat, the group may need to quickly reschedule a session.

All students should discuss the same content. While each chat session on a topic will take its own path, it is important that the entire group critique the same material. This will mean that the instructor must restrict choice in the learning environment, however, students will have the experience of collaborating in the online environment.

In our review of things we learned from delivering this course, we need to return to an important feature. The **face-to-face sessions in our class were critically important**, and there is every reason to suspect that many of our findings were mediated by the simple fact that we met as a group on several occasions. Even the virtual face-to-face sessions (two-way videoconferencing) had a strong influence on developing a sense of community among the students and instructors. While it may be possible to build virtual learning communities in entirely online environments, we suspect it would be much more difficult to accomplish than it was in a mixed mode class.

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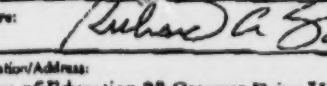
Signature: 	Printed Name/Position/Title: Dr. Richard A. Schwier, Professor
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